

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A phase-change optical information recording medium in which information can be recorded, reproduced and rewritten, comprising:

a first transparent substrate having a wobbling groove which is spirally formed thereon at a pitch;

a first dielectric layer located overlying the first transparent substrate and having an optical thickness of from 80 nm to 200 nm;

a phase-change recording layer located overlying the first dielectric layer and having an optical thickness of from 20 nm to 50 nm when the phase-change recording layer is in an erased state;

a second dielectric layer located overlying the phase-change recording layer and having an optical thickness of from 10 nm to 70 nm;

a reflection layer located overlying the second dielectric layer; and

a second transparent substrate located overlying the reflection layer,

wherein a push-pull signal is from 0.27 to 0.54 after recording.

Claim 2 (original): The optical information recording medium according to Claim 1, further comprising a third dielectric layer between the second dielectric layer and the reflection layer.

Claim 3 (original): The optical information recording medium according to Claim 1, further comprising an adhesive layer between the reflection layer and the second transparent substrate.

Claim 4 (original): The optical information recording medium according to Claim 1, further comprising a weather resistance layer between the reflection layer and the second transparent substrate.

Claim 5 (original): The optical information recording medium according to Claim 1, wherein the first transparent substrate has a refractive index of from 1.50 to 1.65 and a thickness of from 0.59 mm to 0.62 mm.

Claim 6 (original): The optical information recording medium according to Claim 1, wherein the first transparent substrate has an absolute value of birefringence not greater than 50 nm.

Claim 7 (original): The optical information recording medium according to Claim 1, wherein the pitch of the wobbling groove is from 0.70 μm to 0.80 μm , and the wobbling groove has an amplitude of from 15 nm to 40 nm, and wherein clock information is input in the wobbling groove using a first sinusoidal wobble having a first phase and address information and disk information are input in the wobbling groove using a second sinusoidal wobble having a phase different from the first phase of the first sinusoidal wobble by 180°.

Claims 8 - 15 (canceled)

Claim 16 (new): A phase-change optical information recording medium in which information can be recorded, reproduced and rewritten, comprising:

a first transparent substrate having a wobbling groove which is spirally formed thereon at a pitch;

a first dielectric layer located overlying the first transparent substrate and having an optical thickness of from 80 nm to 200 nm;

a phase-change recording layer located overlying the first dielectric layer and having an optical thickness of from 20 nm to 50 nm when the phase-change recording layer is in an erased state;

a second dielectric layer located overlying the phase-change recording layer and having an optical thickness of from 10 nm to 70 nm;

a reflection layer located overlying the second dielectric layer; and

a second transparent substrate located overlying the reflection layer,

wherein a maximum/minimum ratio of V_{wobble} is not greater than 2.5.

Claim 17 (new): The optical information recording medium according to Claim 16, further comprising a third dielectric layer between the second dielectric layer and the reflection layer.

Claim 18 (new): The optical information recording medium according to Claim 16, further comprising an adhesive layer between the reflection layer and the second transparent substrate.

Claim 19 (new): The optical information recording medium according to Claim 16, further comprising a weather resistance

layer between the reflection layer and the second transparent substrate.

Claim 20 (new): The optical information recording medium according to Claim 16, wherein the first transparent substrate has a refractive index of from 1.50 to 1.65 and a thickness of from 0.59 mm to 0.62 mm.

Claim 21 (new): The optical information recording medium according to Claim 16, wherein the first transparent substrate has an absolute value of birefringence not greater than 50 nm.

Claim 22 (new): The optical information recording medium according to Claim 16, wherein the pitch of the wobbling groove is from 0.70 μm to 0.80 μm , and the wobbling groove has an amplitude of from 15 nm to 40 nm, and wherein clock information is input in the wobbling groove using a first sinusoidal wobble having a first phase and address information and disk information are input in the wobbling groove using a second sinusoidal wobble having a phase different from the first phase of the first sinusoidal wobble by 180°.

Claim 23 (new): A phase-change optical information recording medium in which information can be recorded, reproduced and rewritten, comprising:

- a first transparent substrate having a wobbling groove which is spirally formed thereon at a pitch;

- a first dielectric layer located overlying the first transparent substrate and having an optical thickness of from 80 nm to 200 nm;

a phase-change recording layer located overlying the first dielectric layer and having an optical thickness of from 20 nm to 50 nm when the phase-change recording layer is in an erased state;

a second dielectric layer located overlying the phase-change recording layer and having an optical thickness of from 10 nm to 70 nm;

a reflection layer located overlying the second dielectric layer; and

a second transparent substrate located overlying the reflection layer,

wherein a wobbling amplitude is not greater than 40 nm and a maximum/minimum ratio of V_{wobble} is not greater than 2.5.

Claim 24 (new): The optical information recording medium according to Claim 23, further comprising a third dielectric layer between the second dielectric layer and the reflection layer.

Claim 25 (new): The optical information recording medium according to Claim 23, further comprising an adhesive layer between the reflection layer and the second transparent substrate.

Claim 26 (new): The optical information recording medium according to Claim 23, further comprising a weather resistance layer between the reflection layer and the second transparent substrate.

Claim 27 (new): The optical information recording medium according to Claim 23, wherein the first transparent substrate has a refractive index of from 1.50 to 1.65 and a thickness of from 0.59 mm to 0.62 mm.

Claim 28 (new): The optical information recording medium according to Claim 23, wherein the first transparent substrate has an absolute value of birefringence not greater than 50 nm.

Claim 29 (new): The optical information recording medium according to Claim 23, wherein the pitch of the wobbling groove is from 0.70 μm to 0.80 μm , and the wobbling groove has an amplitude of from 15 nm to 40 nm, and wherein clock information is input in the wobbling groove using a first sinusoidal wobble having a first phase and address information and disk information are input in the wobbling groove using a second sinusoidal wobble having a phase different from the first phase of the first sinusoidal wobble by 180°.